

Appl. No. 10/774,325
Reply to Final Office Action of Nov. 28, 2006

IN THE CLAIMS

This listing of claims replaces all prior versions and listings of the claims in this application:

1. (Currently Amended) A method for producing protein-coated polystyrene microparticles ~~comprising~~ consisting of the steps of:
 - (a) combining a suspension of uncoated polystyrene microparticles with a protein to form a combination, the protein being a partner of a bioaffinity binding pair and having a size from 10 nm to 300 nm as determined by photon correlation spectroscopy,
 - (b) coating the protein onto the microparticles by adsorption under ~~strongly~~ alkaline conditions, wherein said coating step is conducted for a period of 1 to 10 days at ~~the pH of said combination has a value~~ selected from a range of about 10.5 to about 12.5, and
 - (c) separating the non-adsorbed protein from the protein-coated microparticles.
2. (Currently Amended) The method of claim 1, wherein the protein ~~has been~~ is a polymerized ~~protein by chemical treatment~~.
3. (Previously Presented) The method of claim 1, wherein the protein is a streptavidin which has been polymerized by chemical treatment.
4. (Cancelled)
5. (Original) The method of claim 1, wherein the microparticles have a magnetizable core.
6. (Cancelled)
7. (Cancelled)
8. (Cancelled)

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9. (Previously Presented) The method of claim 5 wherein the microparticles have a size of about 2.8 μm and consist essentially of about 88% polystyrene and 12% magnetite.

10. (Cancelled)

11. (Currently Amended) The method of claim 10 wherein said coating step is conducted for a period of 4 to 7 days.

12. (Currently Amended) The method of claim 10 wherein the coating step is conducted at a pH of said suspension is between 11 and 12.

13. (Previously Presented) The method of claim 1 wherein said coating step is conducted with a buffer having a salt content of about 0.3 to about 1.5 M.

14. (Cancelled)

15. (Currently Amended) A method for producing protein-coated polystyrene microparticles ~~consisting of~~ comprising the steps of:

- (a) forming a suspension of uncoated microparticles;
- (b) adding and a protein to said suspension to form a combination in the presence of strongly alkaline conditions, to adsorb the protein onto the microparticle, wherein the protein is a partner of a bioaffinity binding pair and has a size from 10 nm to 300 nm, ~~and;~~
- (c) adsorbing the protein onto the microparticle, wherein the pH of said suspension combination is selected from the range of about between 10.0 to about 12.5;
- (d) incubating the combination for 1 to 10 days in the absence of a crosslinking agent; and
- (e) separating the non-adsorbed protein from the protein-coated microparticles.

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16. (Currently Amended) The method of claim 15 ~~further comprising the step of incubating said suspension for a~~ wherein the length of time of said incubation step is selected ~~from about 4 to about 7 days prior to said separation step.~~

17. (Currently Amended) The method of claim ~~16~~15 wherein said coating step is conducted with a buffer having a salt content of about 0.3 to about 1.5 M.

18. (Previously Presented) The method of claim 16 wherein the microparticles have a size of about 2.8 um and consist essentially of about 88% polystyrene and 12% magnetite.

19. (Currently Amended) The method of claim 18 wherein ~~the pH of said suspension is adjusted to a pH value selected from the range of about 10.0 to about 12.5, and said protein is~~ polymerized streptavidin.

20. (New) The method of claim 15 wherein said coating step is conducted for a period of 4 to 7 days.